

We claim:

1 1. A power distribution system comprising:
2 at least one load;
3 a plurality of power sources; and
4 an interconnect arrangement including a plurality of interconnects, the
5 interconnects connecting each load to a given number of the sources so that each
6 load is fully powered and if any one source fails, all loads of the at least one load
7 remain fully powered.

1 2. The power distribution system of claim 1 wherein all of the sources are
2 DC sources.

1 3. The power distribution system of claim 1 wherein all of the sources are
2 AC sources.

1 4. The power distribution system of claim 1 wherein the at least one load,
2 power source and interconnect arrangement comprises a power distribution
3 subsystem, wherein the at least one load includes first and second X watt loads,
4 wherein the plurality of sources includes first and second 2X watt sources, and
5 wherein the interconnect arrangement includes interconnects that connect the first X
6 watt load to the first and second 2X watt sources and the second X watt load to the
7 first and second 2X watt sources.

1 5. The power distribution system of claim 1 wherein the at least one load,
2 power source and interconnect arrangement comprises a power distribution
3 subsystem, wherein the at least one load includes a 2X watt load, wherein the
4 plurality of sources includes first and second 2X watt sources, and wherein the
5 interconnect arrangement includes interconnects that connect the 2X watt load to
6 each of the first and second 2X watt sources.

1 6. The power distribution system of claim 1 wherein the at least one loads,
2 power sources and interconnect arrangement comprises a power distribution
3 subsystem, wherein the at least one load includes a 4X watt load, wherein the
4 plurality of sources includes first, second, and third 2X watt sources, and wherein the

5 interconnect arrangement includes interconnects that connect the 4X watt load to
6 each of the first, second, and third 2X watt sources.

1 7. The power distribution system of claim 1 wherein the at least one load,
2 power source and interconnect arrangement comprises a power distribution
3 subsystem, wherein the at least one load includes a 5X watt load, wherein the
4 plurality of sources includes first, second, third, fourth, fifth, and sixth 2X watt
5 sources, and wherein the interconnect arrangement includes interconnects that
6 connect the 5X watt load to each of the first, second, third, fourth, fifth, and sixth 2X
7 watt sources.

1 8. The power distribution system of claim 1 wherein the at least one load
2 includes a 10X watt load, wherein the plurality of sources includes first, second, third,
3 fourth, fifth, and sixth 2X watt sources, and wherein the interconnect arrangement
4 includes interconnects that connect the 10X watt load to each of the first, second,
5 third, fourth, fifth, and sixth 2X watt sources.

1 9. The power distribution system of claim 1 wherein the at least one load
2 includes first, second, third, fourth, fifth, and sixth X watt loads, wherein the plurality
3 of sources includes first, second, and third 4X watt sources, and wherein the
4 interconnect arrangement includes interconnects that connect each of the X watt
5 loads to two of the 4X watt sources while connecting each of the 4X watt sources to
6 four different ones of the X watt loads.

1 10. The power distribution system of claim 1 wherein the at least one load
2 includes first, second, and third 2X watt loads, wherein the plurality of sources
3 includes first, second, and third 4X watt sources, and wherein the interconnect
4 arrangement includes interconnects that connect each of the first, second, and third
5 2X watt loads to two different ones of the 4X watt sources while connecting each of
6 the first, second, and third 4X watt sources to two different ones of the 2X watt loads.

1 11. The power distribution system of claim 1 wherein the at least one load
2 includes first and second 4X watt loads, wherein the plurality of sources includes first,
3 second, and third 4X watt sources, and wherein the interconnect arrangement
4 includes interconnects that connect each of the first and second 4X watt loads to
5 each of the first, second, and third 4X watt sources.

1 12. The power distribution system of claim 1 wherein the at least one load
2 includes an 8X watt load, wherein the plurality of sources includes first, second, and
3 third 4X watt sources, and wherein the interconnect arrangement includes
4 interconnects that connect the 8X watt load to each of the first, second, and third 4X
5 watt sources, and wherein the interconnect arrangement includes interconnects that
6 connect the 8X watt load to each of the first, second, and third 4X watt sources.

1 13. A power distribution system comprising:
2 a plurality of loads;
3 a plurality of power sources, the power sources having a collective capacity to
4 fully power all of the loads; and
5 an interconnect arrangement including a plurality of interconnects, the
6 interconnects connecting each load to a given number of different ones of the
7 sources so that each load is fully powered notwithstanding failure of any one of the
8 sources.

1 14. A method of distributing full power to each one of a plurality of loads
2 comprising:
3 providing a plurality of power sources, the power sources being sufficient in
4 number and capacity such that a combination of less than all of the sources is
5 sufficient to power each load; and
6 connecting each load to a given number of the sources so that if any one
7 source fails, each of the loads remains fully powered.